

***** EXAMINATION *****

PETROLEUM REFINING PROCESSES

1. **The first refinery produced**
 - a) kerosene
 - b) gasoline
 - c) diesel fuel
 - d) All of the above

2. **The process of reducing sulfur and its odors is called**
 - a) catalytic dewaxing
 - b) sweetening
 - c) catalytic isomerization
 - d) catalytic cracking

3. **The crude source with the highest percentage of aromatics is**
 - a) Nigerian-light
 - b) Saudi-heavy
 - c) Venezuela-light
 - d) West Texas

4. **Crude oils are defined in terms of American Petroleum Institute**
 - a) weight
 - b) viscosity
 - c) gravity
 - d) sweetness

5. **A crude source that is always considered sour is**
 - a) Nigerian-light
 - b) Saudi-heavy
 - c) Venezuela-light
 - d) West Texas

6. **Dienes are also known as**
 - a) glycerin
 - b) used parafins
 - c) diolefins
 - d) quick aromatics

7. **A type of trace metal is**
- a) nickel
 - b) iron
 - c) vanadium
 - d) Any of the above
8. **Entrained water is also known as**
- a) brine
 - b) acid
 - c) acid rain
 - d) All of the above
9. **Groups of hydrocarbon compounds of differing boiling-point**
- a) ranges are called fractions
 - b) ranges are called cuts
 - c) ranges are called catalytic parts
 - d) ranges are called waxes
10. **The process that converts vacuum residuals is known as**
- a) steam cracking
 - b) catalytic cracking
 - c) coking
 - d) hydrogen steam reforming
11. **The most widely used extraction solvent are**
- a) phenol, furfural, and cresylic acid
 - b) hydrochloric acid and sulfuric acid
 - c) salts of nitrogen
 - d) acetone and alcohol
12. **Continuous coking uses a process with temperatures**
- a) lower than delayed coking
 - b) higher than delayed coking
 - c) the same as delayed coking
 - d) sometimes lower and sometimes higher than delayed coking
13. **Catalyst regeneration involves**
- a) steam stripping and decoking
 - b) coking and drying
 - c) steam and coking
 - d) cracking and drying
14. **High-octane gasoline blending components are called**
- a) adsorbates
 - b) hydrates
 - c) reformates
 - d) solvents

15. **Catalytic hydrotreating is a process used to remove containments such as**
- a) nitrogen
 - b) sulfur
 - c) oxygen
 - d) All of the above
16. **Isomerization converts n-butane into**
- a) an isoparaffin of substantially higher octane number
 - b) a complicated glycerin
 - c) low octane gasoline
 - d) chlorides
17. **Caustic soda solution processes are used to remove**
- a) alkalis
 - b) clays
 - c) mercaptans
 - d) All of the above
18. **A safety requirement for the solvent deasphalting process is**
- a) exact temperature and pressure control
 - b) a low amount of catalyst
 - c) a minimum amount of salt products
 - d) All of the above
19. **Raffinate contains wax that is removed by**
- a) curding
 - b) solvent extraction
 - c) isomerization
 - d) blending
20. **Cooling towers remove heat from process water by**
- a) condensation
 - b) evaporation
 - c) scalding
 - d) Any of the above

GEOGRAPHIC INFORMATION SYSTEMS
 GEOGRAPHIC INFORMATION CENTER
 PO BOX 5839
 MC ALLEN, TEXAS 78502-5839

1-800-522-0139
 kh@acnet.net
 Copyright 2010

| | | | |
|---|--------------------|-------------------|--------------|
| *** ANSWER SHEET *** U293 PETROLEUM REFINING PROCESSES | <u>STATE BOARD</u> | <u>COURSE NO.</u> | <u>VALUE</u> |
| | | | 8 PDH |
| Office Use Only | | | |

FILL IN ONE BOX FOR EACH ANSWER.

| | A | B | C | D |
|----|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |

I hereby certify that I studied the course materials, and the above answers are my own. No other person has helped me to complete this exam.

 Signature

 Date

 Printed or typed name

 Seal or Number

**GEOGRAPHIC INFORMATION SYSTEMS
GEOGRAPHIC INFORMATION CENTER
PO BOX 5839
MC ALLEN, TEXAS 78502-5839**

1-800-522-0139

**kh@acnet.net
Copyright 2010**

Name _____

Company _____

Address _____

City _____ **State** _____ **Zip** _____

Telephone _____ **E-Mail** _____

Fax _____ () **24-Hour Fax**

() **Yes** () **No** If fax and telephone are the same number, shall we call first?

Mail certificates to above address _____ **check address** _____ **envelope address** _____

State + Specialty + PE Registration number (i.e. TX EE 12389) _____

State + Professional Land Surveying registration number _____

NC (North Carolina) + Specialty + PE Registration number _____

NC (North Carolina) + Land Surveying Registration Number _____

Professional Affiliations _____

Return this page with your answer sheet and a check or money order For \$100 per course. Use one check for each registrant (in your company) taking one or more courses. We accept company checks (if they are your employer's). We do not accept third-party checks or checks outside of your city of residence. Using third-party checks that do not include your name or company name may invalidate your professional development hours being reviewed by an audit process. Add \$5 for same day processing and priority shipping.

Make checks or money orders payable to Geographic Information Systems.

